

REMARKS

In view of the above amendments and following remarks, reconsideration of the objections and rejections contained in the Office Action of June 2, 2006 is respectfully requested.

A number of minor formal changes have been made to the specification for the sake of form.

The Examiner rejected the claims as being indefinite in section 3 on page 2 of the Office Action. This rejection is respectfully traversed.

The Examiner alleges that the change wavelength band is a necessary omitted element. However, independent claim 18, the only independent claim now pending, recites that "the multilayer film is structured so as to form a sharpness preventing means for providing an inflection point at a wavelength, within a change wavelength band in which transmittance changes sharply, which prevents a sharp change in transmittance in a predetermined wavelength band." Accordingly, the claim recites the change wavelength band.

If the Examiner's concern is that the specific change wavelength band is not recited, it is respectfully submitted that this is not required. Such does not represent the omission of an essential element. The change wavelength band is exemplified in the specification and within the privy of one of ordinary skill in the art. The claims are not intended to recite the specific examples and embodiments of the specification. Rather, they are intended to indicate the intended scope of protection. Thus, specifying the particular wavelength band is not required and does not represent indefiniteness.

The Examiner's objection as set forth in section 5 on page 3 of the Office Action is acknowledged and has been addressed in new claims 18-25.

The Examiner rejected claims 1-2, 4, 6, 7, 9, 12, 14 and 16 as being anticipated by Hamada et al., U.S. Patent 5,644,124 (Hamada). However, the ray cut filter of claim 18 clearly distinguishes over Hamada.

As described in the background of the invention, the object of the invention is to provide a ray cut filter which prevents transmittance from changing sharply over a predetermined wavelength band, for example the visible region, in order to obtain transmittance characteristics that approximate those that are perceived by the human eye. Note the specification at lines 8-13 of page 3.

To achieve this, a multilayer film is composed of first thin films made of a high refractive index material and second thin films made of a low refractive index material, which are alternately layered. A sharpness preventing means for providing an inflection point to prevent a sharp change in transmittance within a predetermined wavelength band, for example the visible region, is formed. This enables transmittance characteristics that approximate those perceived by the human eye. The sharpness prevention means has the optical film thickness of each thin film in each layer designed so that the layered first and second thin films has substantially the same optical film thickness in at least one of the layers. The layered first and second thin film have optical film thickness that gradually increase from the transparent side plate. In the sharpness prevention means, the optical film thickness of each thin film in each layer is designed so that the layered first and second thin films have substantial the same optical film thickness in at least one of the layers. The layered first and second thin films have optical film thicknesses that gradually increase from the transparent plate side through the layers.

Further, with the sharpness preventing means, at least one adjustment layer is formed which may be provided at at least one location between layers. It is also provided on both ends of the layered structure. The adjustment layer can prevent a change amount in transmittance from changing sharply between layers.

Fig. 1(b) shows a crystal plate 2 supporting adjustment layers alternating with first, intermediate and second layers. The layers 3a, b and c are each composed of first and second thin films 31 and 32 as illustrated in Fig. 1(a). See Tables 1 and 2 for specific examples.

Claim 18 recites that the sharpness preventing means is for providing an inflection point at a wavelength, within a change wavelength band in which transmittance changes sharply, which prevents a sharp change in transmittance in a predetermined wavelength band. The sharpness preventing

means is further recited as comprising optical film thicknesses of each thin film of the first and second thin films having substantially the same optical film thickness in at least one of the plurality of layers. The first and second thin films further have optical film thickness which gradually increase between others of the layers with distance from the transparent plate. The sharpness preventing means is further recited as comprising at least one adjustment layer that is provided at at least one location between the layers and on both ends of the layered structure so as to prevent the amount of change in transmittance from changing sharply between the layers.

The structure recited in claim 18 is not disclosed or suggested by Hamada. Hamada is directed to a photodetector having a multilayer filter. As the Examiner notes, it is comprised of alternating layers of high and low refractive index materials. However, the layer structure is not the same as that recited in claim 18. Simply because Hamada discloses alternating layers of high and low refractive index material does not mean that Hamada discloses or suggests or inherently contains a sharpness prevention means as recited.

In particular, the function required by the claim is not found in Hamada.

The Examiner taking the position that "absent and evidentiary showing to the contrary, the addition of the physical limitations does not provide a patentable distinction over the prior art of record, meeting the limitations of claim 1" is an incorrect statement of the law. As the Examiner stated, claim 1 recited a means plus function limitation. This requires the Examiner to find, for purposes of anticipation, a reference which discloses performance of the exact function as well as discloses structure performing that function that is the same as or equivalent to that disclosed in the application. The Examiner's simple notation of alternating layers of high and low refractive index materials does not meet this burden. As discussed above, there are a number of aspects that result in the sharpness preventing means.

In any case, independent claim 18 is quite specific as to the sharpness preventing means, and clearly recites a number of aspects not found in Hamada. For example, Hamada does not have at least one adjustment layer provided at at least one location between the layers of the multilayer film and on both ends of the layered structure so as to prevent an amount of change in transmittance from

changing sharply between the layers. The Examiner does refer to a matching layer C as an adjustment layer. However, the matching layer C of Hamada forms an antireflection film for a light-receiving substrate and other films. Note column 7, lines 66 to column 8, line 2 of Hamada.

The dependent claims provide a number of additional distinctions over Hamada. However, specific discussion of these distinctions is not necessary at this time.

The Examiner's holding that it would be obvious to one skilled in the art at the time of the invention to modify the thickness of the layers through routine experimentation is specifically traversed. There is no evidence of record to support this conclusion. Applicant's reserve their rights to traverse any and all further positions by the Examiner as set forth in the Office Action not specifically addressed above.

From the above it is respectfully submitted that the present application is now clearly in condition for allowance. Indication of such is respectfully requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicant's undersigned representative.

Respectfully submitted,

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October 2, 2006